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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HARPER, KEVIN C

ART UNIT PAPER NUMBER

2666

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/588,806

Applicant(s)

MO ET AL.

Examiner

Kevin C. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-19, 21, 22, 24-30 and 32-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-19, 21, 22, 24-30 and 32-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

Applicant's arguments filed March 11, 2005 concerning the newly amended claim limitations involving an IP address have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed March 11, 2005 concerning certain features of Dobbins reference have been fully considered but they are not persuasive.

1. Applicant argued against Examiner's reasoning for Dobbins disclosing a receive-transmit pair that includes a high-speed multiplexer and demultiplexer. Examiner noted that this feature is inherent in Dobbins because end users are connected to the switches of Dobbins. The switch of Dobbins (fig. 5, item 11) includes a first and second port (ports 1 and 3), where each port must include a receive-transmit pair in order to transmit and receive data packets from connected end hosts (col. 5, lines 57-58; col. 3, lines 8-12 and 21-25). The switch transmits several packets from an end station to various links (fig. 5, items 15) as well as transmits several packets received from different links to the end station. Hence, the switch must have structure that allows multiplexing/demultiplexing to be performed for each port connecting an end host such that packets are relayed from one port (link) to several end users and from several end users to one port (link).

2. Applicant argued that Dobbins does not teach a first and second routing model that comprises only topology of the respective group (independent topology). However, in Dobbins, data is processed based on routing models that comprise only topology of the port group (VLAN) identified in a packet (fig. 7; note: topology of VLAN 5 and VLAN 20 are independent).

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3. Applicant argued that Dobbins does not disclose an optical link. However, communication links may be FDDI (col. 2, lines 5-13).

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 30 and 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Dobbins et al. (US 5,684,800).

4. Regarding claim 30, Dobbins discloses a node for telecommunication (Figure 5, one of items 11-14) comprising a first port (item 11, port 1) and a second port (item 11, port 3) where each port includes an inherent receive-transmit pair comprising an inherent multiplexer to process egress traffic and an inherent demultiplexer to process ingress traffic (note: traffic to an end station is from different sources and traffic from an end station is destined to different destinations -- col. 5, lines 25-31 and col. 6, lines 13-17). The node also comprises an interface to an external network (Figure 5, item 16 and other trunks to SFPS switches) connected to an internal network (ports 1-3) including the node. The node includes a processing system (Figure 3) to store a first routing model for a first port group including the first port (Figure 7, VLAN 5) and one other geographically distributed port (col. 7, lines 6-12) and to store a second routing model for a second port group including the second port (Figure 7, VLAN 20) and one other geographically distributed port (col. 7, lines 6-12). The first port is programmable to process traffic based on the first routing model and the second port is programmable to process traffic based on the second routing model (col. 6, lines 33-45). The first and second ports are associated with network addresses that are inherently disparate (col. 1, lines 33-35; col. 5, lines 14-30) and

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the first routing model and second routing model have distinct port group topologies (fig. 7; note: topology of VLAN 5 and VLAN 20 for the switch is listed, where each VLAN has a specific independent access port topology).

5. Regarding claims 32-33, the processing system comprises an inherent first CPU to operate the node and an inherent second CPU to be the primary CPU for a port group or groups and to distribute the routing model(s) to each of the ports in the port group(s) (col. 7, lines 6-18).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-8, 10, 12-19, 21-22, 24-29 and 34-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobbins et al. (US 5,684,800) in view of Coden (US 6,331,985) and Tang et al. (US 2003/0165140).

6. Regarding claims 1-3, 5, 7-8, 12-13, 15, 16-19, 21-22, 26-27, 29 and 34-37, Dobbins discloses a transport element (Figure 1, items 11-14) comprising a port group (items 17-19; abstract, lines 1-4) which comprises several ports, point-to-multipoint connectivity between the ports (col. 3, lines 6-25; note: a broadcast packet from any member of a VLAN will be transmitted to all other members of the VLAN), and an identifier operable to represent the port group as a single element (abstract, lines 1-6; note: VLAN-IDs).

7. However, Dobbins does not disclose that the port group is associated with a single IP address. Coden discloses that several destinations are associated with an IP address and a VLAN ID (col. 12, lines 38-39, 44-48 and 50-57). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have an IP address associated with a port group

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in the invention of Dobbins to facilitate simplified IP transmissions (Codan, col. 7, lines 58-60; note: as opposed to multiple unicast transmissions).

8. Further, Dobbins in view of Codan does not disclose that the identifier represents the port group as a single element to disparate elements (Figure 1, items 20). Tang discloses a multicast address that allows an outside end node to transmit to a VLAN (para. 25, lines 6-12; para. 56, lines 9-14; note: the MVLAN tag or ID is associated with only one VLAN when specified). As presented in the current claim amendment, the MVLAN-ID is a single network address representing several ports in a port group (para. 62, lines 1-10). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a port group identifier that identifies the port group as a single element in the invention of Dobbins in view of Codan in order to simplify routing of data packets to multiple destinations.

9. Regarding claims 4, 6, 14, 28 and 38, in Dobbins the transport element (Figure 5, item 11) interconnects SFPS switches acting as IP routers (col. 5, lines 11-15; col. 2, lines 5-13) and Frame Relay switches (col. 1, lines 33-35 and col. 2, lines 10-13; note: Frame Relay is a standardized commonly used access technology).

10. Regarding claims 10, 24-25, 39 and 40, in Dobbins an inherent processor (Figure 3) generates and distributes routing information (Figure 3, item 88).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dobbins in view of Codan and Tang as applied to claim 10 above, and further in view of Feldman et al. (US 6,148,000).

11. Dobbins in view of Codan and Tang does not disclose a router information base (RIB) or a forwarding information base (FIB). Feldman discloses a RIB for providing a table for storing routing information for an entire network and for supplying information to a FIB which is used

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to determine appropriate output ports for packets (col. 8, line 61 through col. 9, line 14).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a RIB and FIB for use in making routing determinations in the invention of Dobbins in view of Coden and Tang in order to efficiently determine appropriate routing decisions for packets.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 571-272-3174. The centralized fax number for the

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Patent Office is 571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is kevin.harper@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see portal.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin C. Harper

August 21, 2005


SEEMA S. RAO 8/23/05
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